

U.S. Serial Number: 10/532,142
Reply to Office Action of: November 15, 2006
Family Number: P1998J018A (JJK-0202)

Page 2 of 11

AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions and listings of claims in the application:

1 – 10. (Canceled)

11. (Currently Amended) A method for hydroisomerizing a waxy feed to produce improved yield of a lube basestock which comprises:

- (a) contacting the waxy feed under hydroisomerization conditions with a catalyst comprising a unitized mixed powdered pellet catalyst, said catalyst ~~comprising~~ consisting essentially of:
 - (i) at least one first component selected from 8, 10 and 12 ring molecular sieves, and mixtures thereof, having a metal hydrogenation component dispersed thereon; and
 - (ii) at least one second component, different from the first component, selected from 8, 10 and 12 ring molecular sieves, and mixtures thereof, having a metal hydrogenation component dispersed thereon; and
 - (iii) ~~wherein said first and second components are present in a ratio such that when evaluated in the conversion of methyl cyclohexane at 320°C to 1,1-dimethylcyclopentane, 1,2-dimethylcyclopentane, 1,3-dimethylcyclopentane and ethylcyclopentane, the catalyst will provide a trans-1,2-/trans-1,3-dimethylcyclopentane ratio in the range of less than about 1 and a selectivity to ethylcyclopentane, at 10% conversion, of at least about 50%.~~

U.S. Serial Number: 10/532,142
Reply to Office Action of: November 15, 2006
Family Number: P1998J018A (JJK-0202)

Page 3 of 11

12. (Currently Amended) The method of claim 11 wherein the ~~dewaxing at~~
least one first component or the at least one second component is at least one of a 10
ring and 12 ring molecular sieve.

13. (Original) The method of claim 11 wherein the 10 and 12 ring molecular
sieves are selected from aluminosilicates and aluminosilicates.

14. (Original) The method of claim 13 wherein the aluminosilicates are
selected from ZSM-5, ZSM-11, ZSM-12, ZSM-22, ZSM-23, ZSM-35, natural and
synthetic ferrierites, ZSM-48, ZSM-57, SSZ-31, Beta, Mordenite, Offretite, ECR-42,
MCM-71, and ITQ-13.

15. (Original) The method of claim 14 wherein said at least one first
component is ITQ-13 and said at least one second component is selected from ZSM-48,
ZSM-35, ZSM-22, ZSM-23, ZSM-57, SSZ-31, and mixtures thereof.

16. (Original) The method according to claim 14 wherein said at least one
first component is selected from ITQ-13, ZSM-57, and mixtures thereof, and said at
least one second component is selected from ZSM-22, ZSM-23, ZSM-35, ZSM-48,
SSZ-31, and mixtures thereof.

17. (Currently Amended) The method according to claim 11 wherein said
first and second components are present in a ratio such that when evaluated in the
conversion of methyl cyclohexane at 320°C to 1,1-dimethylcyclopentane, 1,2-
dimethylcyclopentane, 1,3-dimethylcyclopentane and ethylcyclopentane, the catalyst
will provide a trans-1,2-/trans-1,3-dimethylcyclopentane ratio in the range of less at
least 1 and a selectivity to ethylcyclopentane, at 10% conversion, of at least about 50%.

U.S. Serial Number: 10/532,142
Reply to Office Action of: November 15, 2006
Family Number: P1998J018A (JJK-0202)

Page 4 of 11

18. (New) The method according to claim 11 wherein said first and second components are present in a ratio such that when evaluated in the conversion of methyl cyclohexane at 320°C to 1,1-dimethylcyclopentane, 1,2-dimethylcyclopentane, 1,3-dimethylcyclopentane and ethylcyclopentane, the catalyst will provide a trans-1,2-/trans-1,3-dimethylcyclopentane ratio in the range of less than about 1 and a selectivity to ethylcyclopentane, at 10% conversion, of at least about 50%.

19. (New) A method for hydroisomerizing a waxy feed to produce improved yield of a lube basestock which comprises:

- (a) contacting the waxy feed under hydroisomerization conditions with a catalyst comprising a unitized mixed powdered pellet catalyst, said catalyst consisting essentially of:
 - (i) at least one first component selected from 8, 10 and 12 ring molecular sieves, and mixtures thereof, having a metal hydrogenation component dispersed thereon;
 - (ii) at least one second component, different from the first component, selected from 8, 10 and 12 ring molecular sieves, and mixtures thereof, having a metal hydrogenation component dispersed thereon; and
 - (iii) a third component which is an amorphous inorganic oxide.

20. (New) The method of claim 19 wherein the at least one first component or at least one second component is at least one of a 10 ring and 12 ring molecular sieve.

U.S. Serial Number: 10/532,142
Reply to Office Action of: November 15, 2006
Family Number: P1998J018A (JJK-0202)

Page 5 of 11

21. (New) The method of claim 19 wherein the 10 and 12 ring molecular sieves are selected from alumino silicates and alumino phosphates.

22. (New) The method of claim 21 wherein the alumino silicates are selected from ZSM-5, ZSM-11, ZSM-12, ZSM-22, ZSM-23, ZSM-35, natural and synthetic ferrierites, ZSM-48, ZSM-57, SSZ-31, Beta, Mordenite, Offretite, ECR-42, MCM-71, and ITQ-13.

23. (New) The method of claim 22 wherein said at least one first component is ITQ-13 and said at least one second component is selected from ZSM-48, ZSM-35, ZSM-22, ZSM-23, ZSM-57, SSZ-31, and mixtures thereof.

24. (New) The method according to claim 22 wherein said at least one first component is selected from ITQ-13, ZSM-57, and mixtures thereof, and said at least one second component is selected from ZSM-22, ZSM-23, ZSM-35, ZSM-48, SSZ-31, and mixtures thereof.

25. (New) The method according to claim 19 wherein said first and second components are present in a ratio such that when evaluated in the conversion of methyl cyclohexane at 320°C to 1,1-dimethylcyclopentane, 1,2-dimethylcyclopentane, 1,3-dimethylcyclopentane and ethylcyclopentane, the catalyst will provide a trans-1,2-/trans-1,3-dimethylcyclopentane ratio in the range of at least 1 and a selectivity to ethylcyclopentane, at 10% conversion, of at least about 50%.

26. (New) The method according to claim 19 wherein said first and second components are present in a ratio such that when evaluated in the conversion of methyl cyclohexane at 320°C to 1,1-dimethylcyclopentane, 1,2-dimethylcyclopentane, 1,3-dimethylcyclopentane and ethylcyclopentane, the catalyst will provide a trans-1,2-

U.S. Serial Number: 10/532,142
Reply to Office Action of: November 15, 2006
Family Number: P1998J018A (JJK-0202)

Page 6 of 11

/trans-1,3-dimethylcyclopentane ratio in the range of less than about 1 and a selectivity to ethylcyclopentane, at 10% conversion, of at least about 50%.

27. (New) The method of claim 19 wherein the amorphous inorganic oxide component is at least one of silica, alumina, titania, zirconia, silica-alumina and silica-magnesia.

28. (New) The method of claim 19 wherein the hydrogenation component is selected from Pt, Pd, and mixtures thereof.

29. (New) The method of claim 19 wherein the hydrogenation component is dispersed in an amount ranging from about 0.1 wt.% to about 30 wt. %.

30. (New) The method of claim 19 wherein the amorphous inorganic oxide is promoted or doped with yttria, rare earth oxides, boria and magnesia.